UNITED
NATIONS

E

Economic and Social
Council

Distr.
GENERAL

E/CN.4/1999/103/Add.1
30 November 1998

Original: ENGLISH

COMMISSION ON HUMAN RIGHTS
Fifty-fifth session
Item 19 of the provisional agenda

ADVISORY SERVICES AND TECHNICAL COOPERATION IN THE FIELD OF HUMAN RIGHTS

Situation of human rights in Somalia

Addendum

Forensic report: preliminary assessment of mass graves in the vicinity of Hargeisa, Somalia

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* The full report of the mission is reproduced in the annex in the language of submission only.

GE.98-14685 (E)

SUMMARY REPORT

1. The mission was carried out by Physicians for Human Rights (PHR) under the auspices of the Office of the United Nations High Commissioner for Human Rights in accordance with Commission on Human Rights resolution 1997/47 of 11 April 1997. The mission, to conduct an on-site assessment of alleged mass graves in the vicinity of Hargeisa, Somalia, was carried out at the request of the independent expert of the Commission on Human Rights on the situation of human rights in Somalia, Ms. Mona Rishmawi. The forensic team provided by PHR consisted of forensic anthropology experts William D. Haglund, PhD, from Seattle, Washington, United States of America, and Owen B. Beattie, PhD, from Edmonton, Alberta, Canada. Between 17 and 21 December 1997, the forensic team observed and examined a minimum of 92, and possibly as many as 116 alleged graves in three areas on the southern and southwestern outskirts of Hargeisa. These sites are referred to locally as the Milk Factory site, the Malko Durduro Elementary School site and the Badhka site. Test excavations at suspected mass grave features were undertaken by the team at two of the sites, one in the area of the Badhka site (designated site BDK and feature BDK-1) and the other in the area of the Malko Durduro Elementary School site (designated site MKD and feature MKD-1). These features were subsequently shown to be graves.

2. Feature BDK-1 contains one young adult male and one adult male individual (designated BDK-1-1 and BDK-1-2, respectively), both completely skeletonized. The clothed adult male has indications of cranial trauma, in particular on the left side of the cranial vault. No evidence of trauma is seen on the unclothed young adult male. Remnants of preserved hair and fingernails are found with these individuals. Loops of cotton-like material associated with the individuals may be discarded ligatures. Patterned impressions on the floor of the grave are consistent with the grave having been dug by an earth moving machine, as stated by a witness to the Government's Technical Committee for the Investigation of War Crimes of the Siad Barré Regime (hereafter referred to as the Technical Committee). The context of these discoveries leads the forensic team to conclude that many of the other mound features at BDK and nearby sites are likely to contain human remains.

3. Recent superficial disturbance by children of a suspected grave at the Malko Durduro Elementary School site (MKD) had partially exposed human skeletal remains and a possible rope ligature. This information had been reported to members of the Technical Committee. The forensic team decided to examine these discoveries further, partly in an effort to secure forensic information before additional damage could be done to the site, and to establish the nature of the ligature. Four completely skeletonized adult male individuals were discovered in feature MKD-1, and designated MKD-1-1 to MKD-1-4. They were partially excavated in relief and closely examined.

4. Three of the individuals (MKD-1-1, MKD-1-2, and MKD-1-3) are tightly grouped and bound to each other by a ligature, consisting of a single continuous length of 4 mm wide rope (organic fibre, double strand, Z-spun). These three individuals have knotted loops of this rope binding their wrists together behind their back, with the rope connecting them to each other in a line. MKD-1-1 and MKD-1-2 are clothed, while MKD-1-3 is unclothed.

The fourth individual (MKD-1-4) was discovered in the south wall of the excavation and is not totally exposed. This clothed individual is not connected by ligature to the other three. No clear indications of trauma were identified in the three individuals linked by the ligature. The fourth individual (MKD-1-4) has fractures at the junction of the left ascending ramus of the mandible to the mandibular body. Preserved hair and fingernails are found associated with all four of these individuals.

5. During the excavations of BDK-1 and MKD-1, the forensic team regularly reviewed in detail all procedures and discoveries with members of the Technical Committee and their professional associates. This was done within the context of an ongoing field workshop, and was supplemented at the end of the mission by a formal classroom presentation and discussion.

6. The forensic team, having observed a large number of suspected and known mass grave sites in the vicinity of Hargeisa, Somalia, and having conducted an assessment examination of two graves containing a minimum of six individuals exhibiting evidence of perimortem injury, binding and haphazard burial, concludes that human rights violations were committed against these individuals. Therefore, the team recommends that the United Nations, in consultation with the Technical Committee:

(a) Provide assistance to the Technical Committee relating to the procedures for the collection of witness testimony;

(b) Provide assistance to the Technical Committee relating to compiling a comprehensive grave registry, including detailed survey, in the vicinity of Hargeisa, as well as in other regions and towns with suspected mass graves;

(c) Establish a means of providing financial support for the conduct of thorough investigations of alleged and known mass grave sites and human rights violations linked to the period from 1988 to the present; and

(d) In carrying out recommendation (c), (i) authorize and assemble an international team of forensic specialists, to work with local professionals for the purpose of conducting investigations of selected mass graves, and (ii) encourage and support additional forensic investigations, conducted by local professionals trained in forensic methods, and assisted by international specialists.

7. These initiatives have the potential to reveal a series of human rights violations resulting in the deaths of many individuals. The value of this information, above and beyond the obligation to expose and document such violations, relates to the knowledge imparted to the survivors about the true circumstances leading to the disappearance of their kin, and the ability of the community and society to deal with this knowledge through the repatriation and reburial of their dead. The forensic evidence compiled provides the foundation for any future pursuit of legal accountability for identified crimes.

Annex

Report of a mission to conduct an on-site assessment of alleged mass graves in the vicinity of Hargeisa, Somalia

I. INTRODUCTION

A. Mandate and structure of the mission

1. This mission was carried out by PHR under the auspices of the Office of the United Nations High Commissioner for Human Rights in accordance with Commission on Human Rights resolution 1997/47 of 11 April 1997. The goal of the mission was to conduct an on-site forensic assessment of alleged mass graves in the vicinity of Hargeisa, Somalia, and was requested on behalf of the independent expert on Somalia, Ms. Mona Rishmawi. The proposal and initial discussions for this mission were communicated to Dr. Robert Kirschner, PHR, in a letter dated 16 October 1997 from the Chief a.i., Activities and Programmes Branch, UNHCHR. The forensic team provided by PHR were forensic anthropology experts William D. Haglund, PhD, from Seattle, Washington, United States of America (acting as team leader) and Owen B. Beattie, PhD, from Edmonton, Alberta, Canada. On 11 December 1997, a cooperation agreement between the United Nations and PHR was signed. The forensic team departed on 13 December 1997 for an anticipated five-day visit to Hargeisa and its vicinity.

2. In accordance with the cooperation agreement, the forensic experts were to: (a) perform their functions under the authority of the independent expert of the Commission on Human Rights on the situation of human rights in Somalia and; (b) perform the following functions (extracted from Article III, Obligations of the forensic experts):

(i) Undertake all necessary tasks pertaining to determination of the nature of the graves and conducting a preliminary assessment on the conditions of the remains and types of injuries to the bodies who are presently lying in mass graves in the city of Hargeisa;

(ii) Assessment of all logistical considerations regarding the exhumation and examination of all the graves;

(iii) Conduct a one-day workshop for the local authorities and non-governmental organizations in order to provide them with basic information on how to determine whether corpses discovered in a mass grave are the result of a massacre and how to preserve evidence;

(iv) Prepare and submit, upon completion of the project, a detailed report of their findings to the independent expert of the Commission on Human Rights on the situation of human rights in Somalia.

B. Background history of the mission

3. The presence of mass graves, discovered in Hargeisa, Somalia (9.31N, 44.02E), was brought to the attention of Ms. Mona Rishmawi, the independent expert on Somalia, in the summer of 1997. The discovery of these graves resulted from their exposure due to flooding caused by heavy rains in mid-May 1997. They were situated approximately 500 metres north-northwest of the headquarters of the 26th sector of the Somali National Army (hereafter referred to as the Army Headquarters), which had formerly commanded all armed forces stationed in the northern region of Somalia. The account of events following the discovery of the remains, confirmed by the UNDP Office for Somalia, indicated that several hundred bodies were unearthed and then reburied by the local community. A videotape record of some of these events was made by the local authorities. It was reported that the victims unearthed, men, women and children, had been bound by the wrist and roped together in groups of 10 to 15 individuals. These graves were alleged to have resulted from mass killings and subsequent burials conducted by the government troops in 1988 during the regime of President Siad Barré.

4. The forensic team arrived in Hargeisa on the afternoon of 17 December 1997 and was met by a formal delegation representing members of the Technical Committee and the government of the self-declared Republic of Somaliland (hereafter referred to as Somaliland). The delegation was led by the acting Chair of the Technical Committee, Mr. Rasheed Haji Abdillahi Guleed, Minister of Post and Telecommunications. Also present was Matthe Schwerzer, Administrator of the United Nations Service Office (UNSO). The following report presents details of the mission as well as the resultant conclusions and recommendations.

II. ASSESSMENT OF SUSPECTED AND ALLEGED MASS GRAVE SITES

5. Based upon witness statements taken by the Technical Committee and the evidence of the previously identified flood-exposed mass graves, three areas on the south and southwest outskirts of Hargeisa were identified as containing known, suspected and alleged mass graves. These sites are referred to locally as the "Milk Factory" site, the "Malko Durduro Elementary School" site, and the "Badhka" site. According to a "machine driver", who owned a "digging machine", he and an employee were forced to dig grave pits in and around Hargeisa during the late spring and summer of 1988. They used an earth moving machine with a front end digging capacity. The machine driver indicated that the pits for the graves varied in size in accordance with the numbers of individuals to be buried. The driver then dumped bodies, which had been loaded into the machine bucket, into the pits. The graves were then backfilled and earth piled above the level of the surrounding soil, giving each resulting grave hillock a distinctive elongated dome shape. The exact location of many of these graves was pointed out to the Technical Committee by the witness; other hillocks were interpreted by the Technical Committee to be graves, but are currently lacking witness corroboration. These three areas are discussed below. The map coordinates given for each site are those provided on a set of 1:20,000 scale maps (identified as: Hargeysa 4 and 5) compiled and drawn from aerial photographs dating back to February and March 1985 by Photomap International Inc., c/o Photomap (Kenya) Limited, P.O. Box 43805, Nairobi, Kenya. The Technical Committee provided copies of these maps for the use of the

forensic team. In addition to the map coordinates, site locations are given in relation to straight line distance to the Army Headquarters. The map coordinates for the Army Headquarters are N1055750, E394650. It is at an elevation of 1,285 metres above sea level. Compass directions provided in the report relate to true north.

A. Mass graves in the vicinity of the Milk Factory

6. This site is located on the south side of the river along a secondary road approximately 1,700 m east of the Army Headquarters and at an approximate elevation of 1,275 m. The map coordinates are N1055750, E396490. The northern edge of the site begins at the junction of the secondary road, running in a north-west/south-east direction, with a primary road, running east/west. The southern limit of the site is approximately 200 m south-east of the junction. The site is approximately 75 to 100 m wide. The east side of the secondary road along this distance is a traditional cultural cemetery consisting of many formal interments described as containing single remains. The alleged mass graves are directly adjacent to and partly intermingled with these formal graves. Most of the alleged mass graves are found on the west side of the secondary road in an area mainly devoid of vegetation.

7. The formal cultural burials are distinguishable from alleged mass graves as they have elaborate stone pavements and cobbles, or other markers, placed over their surfaces. By contrast, the suspected mass graves are characterized by overlying elongated mounds of soil with an average long axis length of 3.5 to 6 m, a width of 2 to 3 m and a height of approximately 1 m above the surrounding ground surface. Although 59 features consistent with alleged graves were noted at this site, a number were determined by the forensic team to be too small and/or too irregular to be identified in this preliminary assessment as being potential mass graves. The forensic team concluded that a minimum of 40 definite features were consistent with mass graves, and that the less obvious features would still warrant investigation at the appropriate time. No test excavations were undertaken in the vicinity of the Milk Factory.

B. Mass graves in the area of Radhka

8. This site is located on the south side of the river on the western edge of a community of homes, approximately 2,600 m east/south-east of the Army Headquarters, and at an approximate elevation of 1,300 m. The map coordinates are N1054750, E397150. No formal road leads to the site, though vehicle access is possible. The site is approximately 250 m long in a north/south direction and approximately 100 to 125 m wide. The area is mainly devoid of vegetation. This area of alleged mass graves is also directly adjacent to a traditional cultural cemetery.

9. Twenty-nine features were identified, consisting of mounds of soil averaging 3.5 m long, 2.5 m wide and 1 m in height above the surrounding ground surface. Ten of these alleged graves are intermingled with the formal cultural graves at the south end of the site. The remaining 19 mounds are concentrated in the north-western portion of the site and are separate from the cemetery. The location and appearance of these mounds are consistent with witness testimony as being potential mass graves.

10. As this site was in a more remote location than the Milk Factory and therefore less likely to attract many onlookers, it was decided that the assessment excavation would take place here. One alleged grave on the north-east edge of the site, designated as BDK-1, was independently chosen by the forensic team for excavation. This excavation was undertaken on 19 and 20 December 1997 in order to establish the nature of the features, to verify if there were people buried in them and, if so, to determine the number of individuals, their sexes, ages and types of injuries (if any), and to identify and document other associated forensic evidence.

11. The test excavation at BDK-1 - Feature BDK-1 was of a low mound of soil with a long axis measuring 3.5 m and a width measuring 2 m. The long axis was in a north-east/south-west orientation. The height of the mound was about 80 cm above the surrounding ground surface. Some disturbance in the north-east section of the mound appeared to be weather related.

12. The assessment excavations followed established forensic archaeological procedures, including the establishment of a datum, and the examination and recording of surface features and contours, with some necessary modifications (see Manual on the Effective Prevention and Investigation of Extra-Legal, Arbitrary and Summary Executions, 1991, United Nations). The tools used were hand shovels, trowels, hand brooms, paint brushes and soft wood probes. Photographs of all stages of the excavation were taken with a Canon F1 35 mm single lens reflex camera, using 100 mm macro, 20 mm, 28 mm, and 50 mm lenses. Film used was Kodak Ektachrome Elite (transparency) and Gold 200 (print), both ISO 200. Soil screening was not done during this assessment excavation, but any future work at this grave must include a complete screen search of the excavated soil. A number of local workers were employed to assist in the digging (numbers ranged from four to eight at various times during the excavation).

13. A 1 m wide and 6 m long trench outline was established and centred along the long axis of the mound. To preserve the cross sectional profiles of the mound, the initial excavation consisted of maintaining a 1 m square balk located in the exact centre of the mound, and excavating 1 m on the west and east sides within the demarcated grid. The final excavation unit measured 3 m by 3 m.

14. Initial digging consisted of removing horizontal layers within the grid until a depth of 50 cm below the surrounding ground level was reached. At this point, no discoveries had been made. Photographs of the vertical soil profiles of the trench and balk were completed. This was followed by the extension of the excavation another metre to the north and south sides of the original trench lines. After the widening and deepening of the excavation unit, human bones were found at a depth of approximately 75 cm below the surrounding ground surface, and almost directly under the central and highest point of the mound. This individual was designated BDK-1-1. Continuing excavation revealed a second individual to the north of BDK-1-1, and at the same depth, designated BDK-1-2. Directly beneath these bodies the soil was scored by a series of seven parallel grooves running in a roughly north/south direction.

15. The light red-brown soil was found to be very dry and loose, and mixed with easily crumbled consolidated lumps of various sizes. The looseness of the soil made it very difficult to pedestal the remains of the individuals. Beneath the bodies the soil was very compact, hard and easily distinguishable in texture from the grave fill. A complete excavation would make it possible to determine the full extent of the original grave pit. The soil characteristics beneath the body were very different, and mark the limits of the original excavation when preparations were being made for the burial of these individuals. The scored, hard soil beneath the bodies is prominently concave along the axis of the bodies and perpendicular to the grooves. The bodies had been placed in the central and lowest part of the original excavation. The forensic team interpreted that the concavity of this feature, along with the seven parallel grooves, was produced by an earth moving machine with a toothed bucket. A pit nearly 80 cm deep in the centre was scooped out with this machine. The bodies were then placed in the bottom of the depression and the hole backfilled, leaving a characteristic mound marking the location.

16. Victims BDK-1-1 and BDK-1-2 were completely exposed during the excavation. After photography, the bones and associated materials found with each individual were temporarily collected for on-site examination and analysis.

17. Individual BDK-1-1 is male and between 17 and 22 years of age at the time of his death. His unclothed body is oriented on its back in a roughly east/west direction, with his head to the east. The head is resting completely on its left side, with the face to the north. His left arm is positioned with the elbow over the lower thorax, and the forearm flexed 90 degrees towards the right. The right arm roughly parallels the placement of the left arm. Both legs are moderately flexed and bent to the right side. The knees are flexed past 90 degrees. The left side of the thorax is in contact with the left abdominal and hip areas of BDK-1-2. No trauma is noted. A length of light pink coloured cotton-like material, tied in a loop with an approximate diameter of 4 cm, is found 8 cm north of the frontal bone. A nearly identical object is found in contact with the distal end of the left tibia.

18. Individual BDK-1-2 is male and between 25 and 35 years of age at the time of his death. The remains are oriented in an east/west direction with the head towards the west. He rests on his back, his left upper arm at his side, tightly flexed at the elbow, with the hand resting on his left shoulder. His right arm is partly abducted, with the forearm tightly flexed and the right hand resting beside the skull. His head is turned on its right side, with the face directed to the north. Both legs are fully extended. He is clad in green-coloured socks and trousers and two pairs of underpants. The outer pair of underpants are boxer-type, of light coloured background with a dark plaid pattern. The innermost underpants are brief-style, maroon in colour with horizontal light-coloured stripes. The upper garments consist of a light-green-coloured wind breaker, with a full zipper up the front, unzipped, and light-coloured, zippered pocket slashes at the sleeves. Underneath this is a double layered, knit, v-necked, blue long-sleeved sweater, with a light coloured knit lining. Beneath this the victim is clad in an olive-green long-sleeved shirt with button down breast pockets. In the

right breast pocket is a "Bic" brand ballpoint pen. The innermost layer is a sleeveless, maroon undershirt, with light coloured piping at the edges of the zippered pockets of the sleeves and around the neck. Trauma to the cranium consists of radiating fractures of the temporal, parietal and frontal bones emanating from the external auditory meati bilaterally, with an associated basal skull fracture.

19. Upon conclusion of the examination, and with the agreement and assistance of the Technical Committee, the human remains and clothing are individually wrapped in plastic tarpaulins and reburied on the floor of the grave, pending further, more extensive analysis.

Summary

20. The independently chosen feature, BDK-1, is an isolated, primary, undisturbed grave containing two individuals. Impressions on the floor of the grave are consistent with the grave having been dug by machine as stated by a witness to the Technical Committee. The interpretation of the observed cranial trauma found in BDK-1-2 would be premature at this time, though the injuries are significant and probably lethal. No evidence is removed from the site.

21. The context of the discoveries leads the experts to conclude that many of the other features, pointed out as being graves by members of the Technical Committee, are likely to contain human remains.

C. Mass graves in the vicinity of the Malko Durduro Elementary School (MKD)

22. The Malko Durduro Elementary School vicinity, adjacent to the southern bank of the seasonally dry river bed which bisects Hargeisa into north and south sections, minimally extends from a point 15 m north-west of the school building (the building is 450 m north north-west of the Army Headquarters) across a primary road and eastward along the south bank of the river for a distance of approximately 175 m, ending at the site of the discovery of mass graves in May and June 1997 (the map coordinates for these graves are N1056260, E394620). The school building has an elevation of 1,275 m. Between these easterly graves and the school are graves partially excavated by locals and marked by stones and extensive cactus growth (the map coordinates for these graves are N1056250, E394600). A minimum of 15 to 20 graves were noted in this area.

23. In surveying beyond the immediate vicinity of the school on 19 December 1997, the forensic team was shown a minimum of eight other alleged graves which had been found in the region. Approximately 500 m to the west of the school a grave consisting of an interment, with human bones and clothing eroding from the surface of a shallow mound, was observed on the edge of a farmer's field (20 m west of this grave, a partial and scattered human skeleton was found on the surface on the steep, heavily vegetated bank leading upward to a road to the south). A minimum of four additional graves were found approximately 200 m to the south-west of the farmer's fields, in an area known as the "Check Point". Returning eastward, additional graves were observed approximately 25 m outside the south-west corner of the former Army

Headquarters compound wall. A number of these graves were large and had clothing and human bones protruding from them. Surface scattered human bones were also seen associated with these mounds.

Test excavation at MKD-1

24. On the day prior to the arrival of the forensic experts, boys from Malko Durduro Elementary School had been digging in a mound approximately 25 m to the north-west of the school building. This mound is located on the school grounds immediately adjacent to the site of the formal reburial of the skeletons recovered by the community in May and June 1997. The map coordinates for the mound are N1056200, E394500, and it is at an elevation of approximately 1,275 m. The boys superficially exposed bones and a rope ligature in the northern portion of the mound. Upon their discovery, the boys ceased their digging and covered over the bones and ligature with soil, marking the site with a tin can and stick. These boys were present during the forensic team's incidental visit to the site on 19 December 1997, and they reported their findings to members of the Technical Committee at that time. In re-exposing and examining the bones and ligature, it was decided by the forensic team that further investigation of this feature was warranted for two reasons: first, the disturbance illustrated the vulnerability of the site and the real potential of valuable forensic evidence being lost; and second, the discovery of a ligature was important forensic evidence providing critical insight into the nature of the burial.

25. On 20 and 21 December 1997, a test excavation was conducted at this feature, which was designated MKD-1. A number of local workers were employed to assist in the digging (numbers ranged from four to eight at various times during the excavation). Their activities were closely supervised by the forensic experts. The excavation and recording methods applied to BDK-1 were followed for MKD-1.

26. The feature was an elongated, irregular, mounded surface 8 m long, 2.5 to 3 m wide and 70 cm high. The long axis was oriented in a north south direction. The remains discovered by the schoolboys were located at the northern limit of this feature. Before the excavation was started, the limits of the disturbance at the northern end were determined. Careful troweling and sweeping of the surface revealed the looser, disturbed soil, and it was possible to identify clearly the complete disturbed area. This area consisted of a shallow depression on the east side of the mound, measuring 1.5 m long by 0.75 m wide and following the long axis of the feature. The undisturbed portions of the feature were easily determined as the soil was very firm and compacted in comparison with the disturbed section.

Victims

27. Four male individuals, designated MKD-1-1, MKD-1-2, MKD-1-3 and MKD-1-4, are exposed in relief. Three of the individuals (MKD-1-1, MKD-1-2, and MKD-1-3) are tightly grouped and bound to each other by a ligature, consisting of a single continuous length of 4 mm wide rope (organic fiber, double strand, Z-spun). Each individual has knotted loops of this rope binding their wrists together behind their backs, with the rope connecting them to each other in a line in the sequence MKD-1-1 to MKD-1-3 and then to MKD-1-2. The rope length

is about 50 cm from MKD-1-1 to MKD-1-3, and 30 cm from MKD-1-3 to MKD-1-2. The overall length of the rope visible in the excavation is 140 cm.

28. Individual MKD-1-1 rests on his back in a roughly north/south direction, with the head to the north. His body is extended, with his hands tied behind his back. His head is resting on the occipital bone and the mandible has fallen down, exposing both dentitions. Bones of both hands, the radius and ulna of the left arm, a number of ribs, and the right innominate have been disturbed by the exploratory digging of the schoolboys. This individual is clad in brown trousers and jacket and a long-sleeved shirt. He wears no foot apparel. The ligature is tied to his right wrist. The relationship of the left forearm to the ligature cannot be determined due to the previous disturbance of this part of the grave. The ligature runs from this individual to MKD-1-3.

29. Individual MKD-1-2, located 60 cm west of MKD-1-1, rests on his left side in a roughly north/south direction, with the head to the south. His left leg is extended, and his right leg partially flexed at the knee. Both arms extend perpendicularly behind him, with the ligature connecting him to individual MKD-1-3. His head is resting on its left side, slightly face down. He is clad in military-type, camouflage trousers and shirt. The ligature is tied to his right wrist. The left wrist is not exposed during the excavation, and its relation to the ligature is not yet determined.

30. Individual MKD-1-3 is unclothed, resting on his stomach, with the upper torso slightly twisted to his left and oriented roughly in a north/south direction, with the head to the north. The arms extend perpendicularly behind his back. His hips and knees are maximally flexed under his abdomen. A large tree root (8 cm in diameter) runs east/west across the ischial bones, indicating the edge of this part of the pit during the original burial. The ligature is tied to his right wrist, that is, the distal ends of the radius and ulna are within the loop. The ligature extends in one direction to MKD-1-3, and the other direction to MKD-1-1. The left wrist is positioned near the right wrist, but the radius and ulna are not positioned within the loop.

31. Only the skull, neck, left shoulder, and superior and posterior thorax of individual MKD-1-4 are exposed during the excavation. This individual rests on his stomach, and is oriented roughly in a north/south direction, with the head to the north. A light coloured shirt has been partially pulled down off the shoulder. The left humerus angles slightly across the back of the individual. The head rests on the right cheek and is slightly turned to the left. The left ascending ramus of the mandible is fractured in at least two locations, including the junction of the ramus to the mandibular body. No bindings are identified. A loose bundle of torn plastic and fabric about 20 cm in diameter is found directly adjacent to the vertex of the skull.

32. Following delineation of the ligature, no further exposure or analysis of the remains were undertaken. With the agreement and assistance of the Technical Committee, the remains were covered with a plastic tarpaulin to protect them and to mark the extent of the excavation. They were then re-covered with soil, and the surface marked with stones and surrounded by a thorn fence.

Summary

33. The feature MKD-1 is a primary, partially disturbed grave containing the commingled remains of three individuals. The presence of a fourth individual suggests extension of the grave to the south. The four males are partially exposed in the test excavation. Three of these persons have their hands tied behind their backs, and are bound to each other. Individual MKD-1-4 has trauma to the left ascending ramus of the mandible consisting of fractures in at least four locations, including the junction of the ramus to the mandibular body. No evidence is removed from the site.

III. WORKSHOP ACTIVITIES

34. The forensic team, while in Hargeisa, provided didactic information to the forensic team to the Technical Committee and local medical staff in two formats: (a) discussion and demonstration of the theory and techniques of grave excavation at the sites of the assessment excavations, and (b) an introduction to human rights investigations of mass graves and basic forensic anthropology, conducted in a classroom and employing a slide-discussion format.

A. Theory and techniques of grave excavation

35. Working within the time available, the basic tenets of forensic excavation of buried human remains to the Technical Committee and local medical staff during the assessment excavations at BDF-1 and MKD-1, including:

(a) Attention to concerns for the security of the site and scene under investigation, of the grave perimeter, and the importance of maintaining 24-hour security throughout the investigation (that is, providing security control of the site by limiting access to authorized investigation staff only, to maintain the integrity of the site and to protect and preserve the evidence);

(b) An introduction to basic survey and mapping methods, and a discussion of the requirements for site and scene documentation;

(c) Explaining the significance of excavation techniques such as test trenching and the interpretation of site stratigraphy;

(d) A discussion of the necessary forensic documentation of excavation and subsequent analysis;

(e) The interpretation of the site and scene evidence in order to determine the location of human remains, the exact circumstances of the discovered burial, and the location of grave boundaries;

(f) The method of examining human remains at the site, including preliminary determination of the sex and age at time of death of each victim, other characteristics potentially valuable in determining identity, and the identification of possible trauma.

36. During the assessment excavations, some of the Technical Committee, and both local physicians associated with the Technical Committee, assisted in all stages of grave excavation and the examination of the victims' remains.

B. Introduction to human rights investigation of mass graves and basic forensic anthropology

37. Upon completion of the assessment excavations, the forensic team made a 1.5 hour slide-discussion presentation to the Technical Committee and local physicians which reviewed basic concepts of forensic anthropology and the exhumation of mass graves. This part of the workshop was held at the nursing school of the Hargeisa Hospital on 21 December 1997 and included:

(a) Basic questions raised during forensic anthropological investigation of graves, including the determination of sex, age at time of death, individualizing characteristics, evaluation of elapsed time since death, and detection of trauma;

(b) The demonstration of recent and ongoing forensic investigations in Latin America, the former Yugoslavia and Rwanda;

(c) Discussion of the realities and challenges of personal identification in instances of mass death associated with human rights violations: what can be achieved, what may not be achievable;

(d) Discussion and conclusions relating the findings of the assessment excavation to future potential investigations in Somaliland.

IV. SUMMARY FINDINGS, RECOMMENDATIONS AND CONCLUSION

A. Results of assessments, test excavations and examinations

38. A total of 92 to 116 alleged mass grave features are observed in three areas on the outskirts of Hargeisa, Somalia. Forty features are identified at the Milk Factory site, with an additional 19 less distinct features warranting future investigation. Twenty-nine features are identified at the Badhka site. Witness accounts describe these features at both sites as having been dug by machine. They are marked by hillocks of earth mounded over the suspected burial. The third area examined is in the close vicinity of the Malko Durduro School, where 15 to 20 suspected mass grave features are observed, along with a minimum of eight additional features in a more extended area to the west, south-west, and south-east of the school. Surface characteristics from these observed features are similar to those of the suspected mass grave features at the Badhka site and the Milk Factory site.

39. Two features were independently selected by the forensic experts for testing: one at the Badhka site (BDK-1) and the other adjacent to the Malko Durduro School (MKD-1). Both contain human remains. All human remains examined are fully skeletonized and, along with clothing and ligatures observed, are in a good state of preservation.

(a) The feature designated BDK-1 is a grave containing two male individuals, of 17 to 22 and 25 to 35 years of age respectively. No trauma is

observed for the younger victim, while the older demonstrates blunt trauma to the cranium. Pink cloth ties, possibly ligatures, are found in association with the lower limbs of each.

(b) The feature designated MKD-1 is a grave, and is excavated in order to determine the circumstances of burial. Four adult male individuals are partially exposed. Three of these victims have their hands bound behind their backs and are tied to each other. One individual has a fractured mandible.

(c) The nature of the graves, evidence of perimortem injury, and the occurrence of bodies bound together by ligature, in combination with the haphazard placement of the bodies in the graves (especially at MKD-1) leads the forensic team to conclude that the deaths of these individuals are suspicious, and constitute a violation of human rights. In addition, the forensic team has verified that features described by witnesses as mass graves are indeed mass graves.

(d) The forensic team emphasizes that the examinations of the sites and victims described in this report were conducted within the guidelines of an assessment mission, and therefore should be considered "in progress" and incomplete. Any future fully supported investigation must begin with the completion of evidence collection at graves BDK-1 and MKD-1.

B. Recommendations

Logistical considerations regarding the exhumation and examination of mass graves

40. Given the number of graves in the vicinity of Hargeisa, it is suggested that the location of all known mass graves be mapped. A limited and representative sample of graves should be fully exhumed and the victims examined. This would best be accomplished by an international team of forensic experts. For those graves not the subject of an in-depth forensic investigation, it is suggested they be excavated by the Somaliland authorities, with the assistance of local physicians, especially trained in forensic analysis of skeletal remains. For graves investigated in this manner, it is advised that forensic monitor(s) observe excavations and provide advisory support in the analysis of human remains. In this way, an independent summary of basic demographics of victims, as well as their cause of death and circumstance of burial could be assembled, thus maximizing the evidentiary value of all graves exhumed, both by international forensic experts and by the Somaliland authorities. Prior to, and concurrent with the exhumations of mass graves, the Technical Committee can be compiling data on missing persons and their families that can potentially provide information leading to identification of victims (e.g. missing person's health, injuries, dental characteristics, and other personally unique physical attributes; DNA).

41. Logistical concerns are as follows:

(a) Funding;

(b) Purchase, transport and storage of materials, equipment and supplies necessary to conduct exhumations and postmortem examinations; appropriate teaching materials and references needed for training;

(c) Selection and scheduling of forensic experts, arrangements for international travel to Hargeisa, transportation, food and lodging.

42. Advance preparations in Somaliland would include the location and securing of facilities for the storage and examination of remains, and the selection and training of a forensic analysis team composed of medical doctors, as well as a local excavation team. Administrative issues concerned with the certification of death and final disposition of remains need to be resolved prior to the start of excavations.

43. It is advisable that any forensic investigations be undertaken in the dry season. A preparation lead time of approximately five to six months to develop and implement the logistics of the mission will be required.

44. Although they have not expanded their enquiry much beyond the area of Hargeisa, the members of the Technical Committee indicate that there exist alleged mass graves in or about the cities of Lasa Anod, Erifvo, Burao, Berbera, Bireme and Zeila. The number and sizes of these graves are not known at this time. Further assessment and consideration would be necessary to take them into account for the forensic investigation.

C. Assistance to the Somaliland Administration

45. It is suggested that training and assistance be provided to the Somaliland Administration in regard to setting up its own forensic team for the purposes of performing controlled excavations of mass graves and the subsequent osteological analysis of recovered human remains. Further international assistance would be helpful in attempts at confirming personal identification of victims.

Conclusions

46. The authors, having observed a large number of suspected and known mass grave sites in the vicinity of Hargeisa, Somalia, and having conducted an assessment examination of two graves containing a minimum of six individuals exhibiting evidence of perimortem injury, binding, and haphazard burial, conclude that human rights violations have been committed against these individuals. Therefore, the authors recommend that the United Nations, in consultation with the Technical Committee:

(a) Provide assistance to the Technical Committee relating to the procedures for the collection of witness testimony;

(b) Provide assistance to the Technical Committee relating to compiling a comprehensive grave registry, including detailed survey, in the vicinity of Hargeisa, as well as in other regions and towns with suspected mass graves;

(c) Establish a means of providing financial support for the conduct of thorough investigations of alleged and known mass grave sites and human rights violations linked to the period 1988 to the present; and

(d) In carrying out recommendation (c), (i) authorize and assemble an international team of forensic specialists, working with local professionals for the purpose of conducting investigations of selected mass graves and (ii) encourage and support additional forensic investigations to be conducted by local professionals trained in forensic methods, assisted by international specialists.

V. ACKNOWLEDGMENTS

47. The authors express gratitude to the following: PHR, Boston; United Nations Office of the High Commissioner for Human Rights, Geneva; United Nations Development Programme (UNDP), Nairobi; and Marthe Schwerzer, Administrator of the United Nations Service Office (UNSO). The cooperation and support of the Somaliland Administration and Technical Committee were indispensable.

(Note: the spellings of some place names and people were provided to the authors by members of the Technical Committee, or are phonetically represented.)

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